



SEPTEMBER ■ 2010



REAL PEOPLE. REAL POWER. Tideland Topics

A NEWSLETTER FOR THE MEMBER-OWNERS OF TIDELAND ELECTRIC MEMBERSHIP CORPORATION

CONTENT ADDITION: Energy savings for manufactured homes

Tideland's popular energy saving website, www.togetherwesave.com, now features a learning module on manufactured homes.

The module includes a link to a comprehensive, 45-page publication from the US Department of Housing

and Urban Development (HUD) discussing the unique energy challenges and opportunities of manufactured homes.

Manufactured housing sales, which experienced a slump during the decade long house building boom, are poised for growth as buyers look for more reasonably sized and priced homes. As sales pick up, expect to see more innovation than ever before.

New Orleans, post-Katrina, has proven to be a robust learning lab for manufactured housing designers. New lines of eco-friendly manufactured homes are now emerging that emphasize economy of space, durability, natural daylighting, and of course achieving an Energy Star home rating. Learn more at www.togetherwesave.com.



LAST CALL:

*Bright Ideas
Deadline
September 17*

Teachers have until September 17 to submit applications for Bright Ideas Classroom Grants. The grants are intended to reward innovative teachers and stimulate creative learning with hands on activities that develop critical thinking skills.

While no particular subject matter is off limits, the cooperative does encourage applications related to the science of energy as well as conservation and energy efficiency.

The maximum grant amount is \$2,000. There is no minimum request. Items purchased with the grant funds belong to the school and should be used for their intended purpose.

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Grant winners will be notified in October and will receive their awards at a banquet in Greenville in November.

The application process may be completed online at www.ncbrightideas.com.

Please note: Grant funds may not be used for field trips, salaries, meals, teacher training, stipends or individual prizes and awards.

For more information contact program coordinator Heidi Smith at 252.944.2410.

Message to our Member-Owners: Our role in small renewables

By Cecil O. Smith, Jr.
General Manager & CEO

On June 18, Tideland history was made when the co-op completed our first two small solar interconnections.

Each member owned system consists of roof mounted photo voltaic solar panels. We've found it very educational to track the kilowatt hour production data for each site and will discuss the projects more fully in a future issue of Tideland Topics.

What I want to focus on this month is Tideland's role in the interconnection process. Our role is twofold: the first is as a member service advisor and the second is as an interconnection partner.

As a member service advisor, our goal is to help co-op members make informed energy decisions regardless of fuel type or generating source. When members call to inquire about renewable energy, our first question is "What is your goal?" If the goal is to reduce energy costs, we discuss the economics of energy efficiency projects

which often pay for themselves in a short period of time.

If the member has other goals in mind, such as living a greener lifestyle, we encourage them to do their homework in advance. For example, we suggest that they complete a thorough analysis of their home's wind or solar potential. With wind it is particularly important to get a full year's worth of wind data before committing to the purchase of a wind turbine.

Practically all co-ops in North Carolina do not offer net metering. Instead, all of the energy produced is put onto the grid, and the generator receives kilowatt hour revenue from the co-op and then brokers the sale of the renewable energy credits to resellers including NC GreenPower. This revenue stream, combined with federal and state tax credits, goes towards reducing purchase and installation costs.

Members are also advised to consult a tax professional beforehand to make sure

they are in a position to take advantage of the tax credits.

In our role as an interconnection partner, our priorities begin with safety. Large or small, all interconnecting facilities must comply with the National Electric Safety Code. This includes installation of isolation equipment that prevents the renewable energy system from putting electricity on the grid when the utility experiences an outage. This is extremely important for the safety of line workers and the general public. Likewise, power quality must be suitable to avoid surges and other detriments to our system. The renewable generating system must also be registered with the NC Utilities Commission and the Federal Energy Regulatory Commission.

If you are want to invest in renewable resources, remember that you have a valuable resource in Tideland EMC. Give us a call if we can be of assistance.

The value of electricity

What does \$1 of electricity buy these days? More than you think. Here are 6 examples.

36 
(intense) hours of gaming

72 
freshly-ironed shirts

100 
hot pots of coffee

48 
hours of watching TV

72 
hours of laptop Internet access

375 
pieces of toast (nicely browned)

Closed crawlspace done right



Nearly half of the homes inspected by Tideland energy auditors have crawl space moisture problems. The reasons vary: improper grading, a lack of gutters, failure to install a proper vapor barrier, plumbing leaks, condensation on ducts and crawl space venting.

Advanced Energy study, recently created a closed crawlspace for Tideland members Chuck and Brenda Boklage of Blounts Creek.

eliminated and a continuous vapor barrier covers the ground and extends up the piers and foundation walls. Johnson noted, "Moisture not only jeopardizes structural

In 2001, building science specialists at Advanced Energy in Raleigh, launched a study comparing homes with vented crawl spaces to homes with properly closed crawlspaces. As a result of the study, the state residential building code was modified to allow for closed crawl space construction.



BEFORE: Mold and mildew appear on floor joists; No vapor barrier on the ground (Larry Johnson photos)

Advanced Energy also documented a 15% decline in heating and cooling costs once a crawl space had been properly closed.

Tideland energy auditor Larry Johnson, who originally inspected Boklage's home in September 2009, recently returned to examine the crawlspace retrofit. All moisture pathways have been

integrity, it decreases the effectiveness of insulation."

Buddy Holliday of New Bern, a contributor to the

Creating a closed crawl space is not as simple as closing off vents and installing an impenetrable vapor barrier. The process requires proper training and experience. Advanced Energy has created a 75 page introductory guide to crawl space issues. It includes four sample closed crawl space designs and an overview of NC residential code requirements. The guide can be found on their website: www.advancedenergy.org



AFTER: A continuous, 8-mil vapor barrier has now been created with all seams sealed with an approved product (Larry Johnson photo)

R-value indicates an insulating material's resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.

The Department of Energy recommends the following insulation values for homes in eastern North Carolina:

R-49
Attic

R-38
Cathedral ceiling

R-25
Floor (over unheated space)

R-15 to R-21
Exterior walls

R-Value per inch

Fiberglass 3.14

Cellulose 3.70

Expanded Polystyrene 4.00

Energy Star Homes Shine Brighter Starting 2011

The U.S. Environmental Protection Agency (EPA) is announcing new, more rigorous guidelines for new homes that earn the Energy Star label. Compared to the current Energy Star guidelines, the new requirements will make qualified new homes at least 20 percent more efficient than homes built to the 2009 International Energy Conservation Code (IECC) – slashing utility bills for qualified homes by 15 percent compared to IECC code-built homes.

The updated requirements will ensure that the Energy Star label continues to deliver a significant increase in energy efficiency over homes that are built to code and standard builder business practices.

These guidelines will go into effect in January 2011, although some builders may choose to adopt the new requirements earlier.

Key elements of the new guidelines for Energy Star qualified homes include:

• **Complete Thermal Enclosure System:** Comprehensive air sealing, properly insulated assemblies and high-performance windows enhance comfort, improve durability and reduce utility bills.

• **Quality Installed Complete Heating and Cooling Systems:** High-efficiency heating and cooling systems engineered to deliver more comfort, moisture control and quiet operation, and equipped with fresh-air ventilation to improve air quality.

• **A Complete Water Management System:** Because Energy Star homes offer a tightly-sealed and insulated building envelope, a comprehensive package of flashing, moisture barriers, and heavy-duty membrane details is critical to help keep water from roofs, walls, and foundations for improved durability and indoor air quality.



• **Efficient Lighting and Appliances:** Look for Energy Star qualified lighting, appliances and fans helping to further reduce monthly utility bills and provide high-quality performance.

• **Third-Party Verification:** Energy Star qualified homes require verification by independent Home Energy Raters who conduct a comprehensive series of detailed inspections and use specialized diagnostic equipment to test system performance.

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Tideland Topics

www.tidelandemc.com

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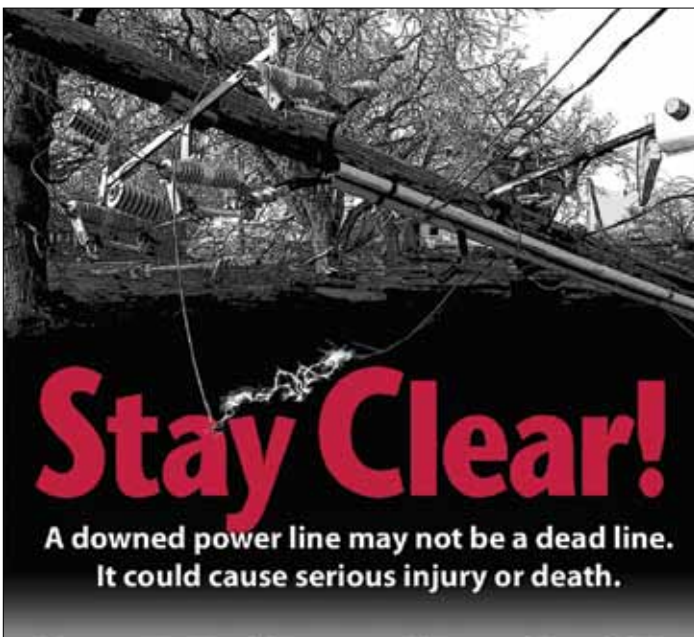
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TOGETHERWESAVE.COM: YEAR ROUND SAVINGS ARE JUST A MOUSE CLICK AWAY



- Never assume that a downed power line is deenergized. Even if utility power is off, a regular household generator backfeeding onto the electric system could reenergize the line.
- If someone is injured by contact with a power line, call 911 and keep others away until help arrives.
- If a power line falls across or near your vehicle while you are in it, stay inside until help arrives. If you must exit, jump clear so that no part of your body is touching the car when you land. KEEP BOTH FEET TOGETHER, and shuffle or hop at least 30 feet away from the vehicle.